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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,958	11/13/2001	Shinichi Shima	862.C2434	6387

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FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER
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NGUYEN, HUNG

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

### Office Action Summary

**Application No.**

09/986,958

**Applicant(s)**

SHIMA, SHINICHI

**Examiner**

Hung Henry V Nguyen

**Art Unit**

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on RCE filed 11/12/03.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 70-77 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 70-77 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 12, 2003 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 70-71, and 73-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi (U.S.Pat. 6,545,746) in view of Miyaji et al (U.S.Pat. 5,559,584).

With respect to claims 70-71 and 73-77, Nishi (figure 9) discloses an exposure apparatus comprising substantially all basic features of the instant claim such as: an illumination optical system (111) for illuminating a reticle (R) with illuminating light from a light source ; a projection optical system (113) for projecting a predetermined pattern formed on the reticle onto a photosensitive substrate (W); a holding unit for holding the reticle (112); a substrate stage (301) capable of holding and moving the substrate; a substrate transport system (115) wherein the substrate transport system and substrate stage is accommodated in a partitioned circulation

Art Unit: 2851

space in which inert gas is filled and circulated by circulating system having a temperature controlled (see col.32, line 61-65; col.33 line 1 through col.34, line 60). Nishi further teaches an air conditioning system (116, 117) for circulating temperature controlled gas in a space other than the participating circulation space (for example, 111, 112) and the circulating space and a off-axis position detecting system having a plurality of positions detecting systems for detecting an alignment mark on the substrate (see col.6, lines 10-19). Nishi (fig.9) also teaches the substrate transport system is disposed on the side of the projection region with respect to the projection center. Nishi lacks to show a reticle transport system. Miyaji et al teaches a reticle transport system (15,16) . It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Nishi and Miyaji to obtain the invention as specified in claims 70-77. It would have been obvious to employ the reticle transport system as taught by Miyaji into the exposure device of Nishi for at least the purpose of transporting the reticle from reticle storage to reticle stage.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

Art Unit: 2851

do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 70-77 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Suenaga (U.S.Pat. 6,377,338).

With respect to claims 70-77, Suenaga (figure 4) discloses an exposure apparatus comprising all of the limitations of the instant claim such as: an illumination optical system (150) for illuminating a reticle (R) with illuminating light from a light source (2) ; a projection optical system (PL) for projecting a predetermined pattern formed on the reticle onto a photosensitive substrate (W); a holding unit for holding the reticle (RS); a reticle transport system (see col.18, lines 38-40); a substrate stage (22) capable of holding and moving the substrate; a substrate transport system (see col.18, lines 53-54) disposed on the side of the projection region with respect to the projection center and wherein the substrate transport system and substrate stage is accommodated in a partitioned circulation space in which inert gas is filled and circulated by circulating system having a temperature controlled (see fig.3). Suenaga further teaches an air conditioning system (116, 117) for circulating temperature controlled gas in a space other than the participating circulation space (for example, 111, 112) and the circulating space includes a connecting member/door (203) which has airtightness and flexibility (see fig.9) and a off-axis position detecting system (28) disposed on the side of the projection region with respect to the projection center and having a plurality of positions detecting systems for detecting an alignment mark on the substrate.

*Response to Amendment*

6. Applicant's amendment filed October 10, 2003 have been entered. Claims 1-69 have been cancelled. New claims 70-77 have been added. With respect to prior art, the patentability of these claims has been carefully considered but has been rejected as set forth above.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 703-305-6462. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

hvn  
12/30/03

  
HENRY HUNG NGUYEN  
PRIMARY EXAMINER